

Date: Fri, 29 Oct 93 04:30:22 PDT
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>
Errors-To: Ham-Digital-Errors@UCSD.Edu
Reply-To: Ham-Digital@UCSD.Edu
Precedence: Bulk
Subject: Ham-Digital Digest V93 #91
To: Ham-Digital

Ham-Digital Digest Fri, 29 Oct 93 Volume 93 : Issue 91

Today's Topics:

 Info on TCP/IP over radio
 Interesting things done with Packet Radio?
 Kantronic TPC-3 SOFTWARE (ver 1.03-5.0)??
 KPC-3 to HTX-202 cable wiring
 NOS problems
 THS Program for WA8DED Hostmode?
 WEFAX, a DX-440, and a KPC-3

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>

Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 28 Oct 1993 14:03:47 GMT
From: newsgate.watson.ibm.com!hawnews.watson.ibm.com!news@uunet.uu.net
Subject: Info on TCP/IP over radio
To: ham-digital@ucsd.edu

In <199310271554.AA31242@trac3000.ueci.com>, ete@trac3000.ueci.COM (Eliot
Everingham) writes:

>I want to connect two UNIX boxen that are a few miles apart. I was thinking
>of setting up a SLIP or PPP connection, but I am intrigued by the idea of
>running TCP/IP over radio. I'm pretty familiar with TCP/IP administration,
>and don't mind hacking through some C source, but I've never used a ham radio.
>I have a couple of questions:

First of all, what are you going to do with your unix boxes? It's illegal to
use the Amateur Radio freqs for business purposes. A bigger concern is
through-put. Most plug-and-play stuff (1200b) get's you under 100

chars/second. Try sending a large file at 100 cps. You might be able to get some 19.2kb stuff going but it is still really SLOW compared to Internet Standards. If you want to move alot of data and you don't have to go very far (line of site) you can use 10Ghz and do 2 mega-bit stuff. I think that this is similar to the Commercial, Broad-Band stuff. I'm note sure what the rules are for general communications in the 10Ghz area. You may not need to be a ham to use some of the Microwave freqs using low power. Most of the 10Ghz stuff is low power. It's very directional and very short range compared to the other bands. It takes a lot of time and energy to scroung up 10Ghz parts. There's very few hams doing that sort of stuff.

If you don't mind slow speed, you could probably get away with a pair of business-band talkies and a pair of tncs. Total cost would be under \$600 new. The Tnc's are around \$115 new. The talkes are \$100 - \$200 or so. If you used these, you wouldn't need to worry about doing business over amateur radio, because these are on non-ham freqs. Not 100% sure that packet is ok on these freqs, but I think that it is. Do you really want 100 cps (more like 60 cps) though?

>

>1) Is there a FAQ?

Yes. Somewhere. Usually posted here I think.

>2) Is there an easy way to connect to the "rest of the Internet" from the ham
> network?

Yep. Telnet to dfwgate.ampr.org (it's down at the moment but it will be back.) It is an Internet/Ampr.Org gateway. The Ampr.Org is the Amateur Radio domain.

>3) What kind of hardware do you need to start up? What does it cost?
see above.

>4) Is there software available to work with TCP/IP under UNIX?

Yes. NOS.

>5) What kind of throughput can be expected? (Assuming an RS-422 serial port)
See above. The computer is not the limiting factor. The RF Modems are generally pretty slow.

>

73's de Jack - kf5mg

AX25net - kf5mg@kf5mg.#dfw.tx.usa.na - (817) 962-4409

Internet - kf5mg@kf5mg.ampr.org - 44.28.0.14

Worknet - kf5mg@vnet.ibm.com

Date: 28 Oct 93 17:12:15 GMT

From: ogicse!uwm.edu!linac!att!cbnews!jeffj@network.ucsd.edu

Subject: Interesting things done with Packet Radio?

To: ham-digital@ucsd.edu

I am wondering if any other things are done with Packet Radio besides working BBS's, doing email and keyboard chats. What else are hams doing with this wondrous beast? 73!

Jeff

--

Jeff Jones AB6MB		OPPOSE THE NORTH AMERICAN FREE TRADE AGREEMENT!
jeffj@seeker.mystic.com		Canada/USA Free Trade cost Canada 400,000 jobs.
Infolinc BBS 510-778-5929		Want to guess how many we'll lose to Mexico?

Date: 27 Oct 1993 11:44:37 -0500
From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!TAMUTS.TAMU.EDU!news.utdallas.edu!corpgate!crchh327.bnr.ca!kharker@ames.arpa
Subject: Kantronic TPC-3 SOFTWARE (ver 1.03-5.0)??
To: ham-digital@ucsd.edu

In article <2alqr3\$i6q@hp-col.col.hp.com>, jms@col.hp.com (Mike Stansberry) writes:

|> szhall@bullwinkle.ucdavis.edu wrote:
|>
|> : I just bought a Kantronics TPC-3 TNC and the software I got with it was
|> : verison 1.02 and the manual talks about verison 5.0..Has anyone else ran
|> : across this?..Tnx..Jeff
|>
|> Current Kantronics K? PC-3s are being shipped with software rev 5.1. If
|> you REALLY have 1.02 on a new tnc, I'd exchange it for another. However,
|> I doubt it. I bought KPC-3s right when they first came out and they
|> started out with rev 5.0, since that matched the revs on the other KPC
|> tncs. I think there is a command (version?) that returns the rev on
|> the firmware , but I don't have my manual with me to look it up.
|>
|> Mike, K0TER
|>

I have a KPC-3 running on my mac, and although I can't remember exactly, I think you have the two pieces of software that come with the package confused. The KPC-3 has what is known as "firmware", the software stored inside the unit itself, and that is the software that should be version 5.0 or 5.1. Kantronics ships a terminal program with the KPC-3 called PacTerm, and that is the software that should be version 1.02. I don't have the manual with me at the moment, but I think if you can get to a cmd: prompt try the command VER to see what version of firmware is in your unit.

PacTerm is just a communications program - you do not need to use it to use your KPC-3. I use the KPC-3 on both Macintosh and Windows boxes running the appropriate versions of Smartcom, a terminal program from Hayes. Any

terminal program should do - there are even specially designed packet terminal programs (that are all a lot better than PacTerm) like PacRatt for DOS, Windows, or Mac by AEA, or Savant for the Mac (I forget who sells this).

Now, if only I could get mine out of KISS mode...

_ken

--

```
=====
Kenneth E. Harker          BNR          "Any opinions expressed
kharker@bnr.ca            Richardson, Texas, USA    are solely mine and do
N1PVB                     (214) 684-5115    not represent BNR"
=====
```

Date: 28 Oct 93 23:33:20 GMT
From: ogicse!uwm.edu!spool.mu.edu!sdd.hp.com!col.hp.com!jms@network.ucsd.edu
Subject: KPC-3 to HTX-202 cable wiring
To: ham-digital@ucsd.edu

Jeffrey Luszcz (jrl2@cornell.edu) wrote:

: Hello,
: I just got a KPC-3 TNC. I need to make the cable between the
: radio and the TNC. I own a htx-202 from radio shack. Does
: anyone know the proper cabling between them? I have
: 2.2kOHM res and 3.9kOHM res and 0.1uF caps plus
: mono 3/32 mono plus, 1/8stero and 1/8 mono plugs.
: Can someone supply me with the proper circuit, tip/sleeve
: data?
: Thanks,
: -Jeff Luszcz
: N2TIQ
: jrl2@cornell.edu

I see a response advising you the wiring is the same as the Icom IC2-AT. That may be so, but if it is, the wiring shown in the KPC-3 manuals for an IC-2AT is wrong.

Here is the way I wired my KPC-3 to work with the Radio Shack HTX-202:

D-9 PIN#

1 -> .1 uF cap -> 7

3 -> 3300 ohm resistor -> pin 7

7 to tip of small (3/32) plug.

5 to tip of larger (1/8) plug.

6 to sleeve of small plug.

9 to sleeve of larger plug.

as shown in the KPC-3 manual, the D-9 radio connector is wired like this:

Pin 1- AFSK out

Pin 2- XCD (squelch-not needed)

Pin 3- Push to Talk

Pin 4- Audio in (from radio)

Pin 5- Audio in (from radio)

Pin 6- Ground/shield

Pin 7- Default is open-can be configured with wire jumpers to do a 'hard reset' by grounding pin 7.

Pin 8- Ground/shield, same as Pin 6

Pin 9- Ground/shield, same as Pin 6

Note: A jumper in the KPC-3 (J2) can be used if you're using only an H.T. that requires the capacitor and resistor. The value of the resistor in the KPC-3 is 4700 ohms, which did not work with my HTX-202. It needed the 3300 ohm. I used pin 7 as a convenient tie point to install the resistor/capacitor. I could have changed the value of R4 in the KPC-3, but I set my stuff up to use numerous different radios.

Mike, K0TER

Date: Thu, 28 Oct 1993 13:49:25 GMT

From: newsgate.watson.ibm.com!hawnews.watson.ibm.com!news@uunet.uu.net

Subject: NOS problems

To: ham-digital@ucsd.edu

In <2534@arrl.org>, bbattles@arrl.org (Brian Battles WS10) writes:

>>I bet that someone has put up an IP router or gateway and people are trying
>>to send you mail. I tried to send you mail and was unsuccessful. If someone
>>has put up a router and you haven't changed your routes to go back through
>>it when needed, people will be able to connect to you via the router and
>>you'll reply to them direct which won't work.

>

> Well, all I know is, I'm using the same Switch as always, and the Switch
>Mgr, Bill Lyman, N1NWP (n1nwp@n1nwp-1.ampr.org or lyman@a3bee2.radnet.com),
>sez he's *sure* _I'm_ doing something goophy!

>

That's why I suggested doing the trace stuff. If you can capture one of these mysterious smtp connects, you can 1) see who it is exactly and what gateway or router they are using (if any) and 2) see where/how your box responds. If it's a routing problem, you'll be able to tell something from the trace. If the stuff is coming from the 44.X.X.X router and your responding through the 44.X.X.Y router then you'll know it. The trace may be very usefull. You turn off the trace using 'trace portname 0'.

73's de Jack - kf5mg
AX25net - kf5mg@kf5mg.#dfw.tx.usa.na - (817) 962-4409
Internet - kf5mg@kf5mg.ampr.org - 44.28.0.14
Worknet - kf5mg@vnet.ibm.com

Date: 25 Oct 93 15:24:45 GMT
From: galaxy.ucr.edu!library.ucla.edu!news.mic.ucla.edu!magnesium.club.cc.cmu.edu!
pitt.edu!dsinc!spool.mu.edu!howland.reston.ans.net!pipex!uknet!root44!praxis!
mikec@network.ucsd.edu
Subject: THS Program for WA8DED Hostmode?
To: ham-digital@ucsd.edu

Hi Folks,

Does anyone know if the THS terminal program for use with WA8DED TNC
firmware is available for anonymous FTP anywhere? archie hasn't unearthed
anything and I've only been able to find the OS/2 version on a BBS and I
need the DOS version.

Thanks, Mike (G6DHU)

Date: 27 Oct 1993 11:54:39 -0500
From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!TAMUTS.TAMU.EDU!news.utdallas.edu!
corpgate!crchh327.bnr.ca!kharker@ames.arpa
Subject: WEFAX, a DX-440, and a KPC-3
To: ham-digital@ucsd.edu

I have become interested in receiving WEFAX transmissions on my
DX-440 and using the KPC-3's WEFAX command to decode them. I have two
questions that I hope people can help me out with:

1) When I make the cable to connect the DX-440's audio-out (a
mono headphone jack) to the DB-9 connector, do I just connect pin 7 to the
tip and pin 9 to the shield? Or do I need to put some resistors or
capacitors in the line? The manual is not too clear about this, and
although I think I would be all right to just connect the two wires
straight through, I thought I would ask. Also, am I safe to assume

that using old coax as the line is possible, as I only need to connect to two pins?

2) What is the best shareware/freeware/public_domain wefax decoding program available for dos/windows or the mac? (I'm currently using a windows box, but I have a mac waiting for me at school.) And where can I find these programs? Or are there worthwhile commercial alternatives?

Thanks in advance for any help!

--

```
=====
Kenneth E. Harker          BNR          "Any opinions expressed
kharker@bnr.ca            Richardson, Texas, USA    are solely mine and do
N1PVB                     (214) 684-5115    not represent BNR"
=====
```

Date: 28 Oct 93 14:51:01 GMT
From: timbuk.cray.com!walter.cray.com!ferrari!jwl@uunet.uu.net
To: ham-digital@ucsd.edu

References <fedee0001.751741029@gold.tc.umn.edu>,
<199310271554.AA31242@trac3000.ueci.com>, <CFKo2K.K9s@freenet.carleton.ca>m
Subject : Re: Info on TCP/IP over radio

In article <CFKo2K.K9s@freenet.carleton.ca>, ae517@Freenet.carleton.ca (Russ Renaud) writes:

```
|>
|> In a previous article, fedee0001@gold.tc.umn.edu (Jimbo) says:
|>
|> >In <199310271554.AA31242@trac3000.ueci.com> ete@trac3000.ueci.COM (Eliot
Everingham) writes:
|> >
|> >>I want to connect two UNIX boxen that are a few miles apart. I was thinking
|> >>of setting up a SLIP or PPP connection, but I am intrigued by the idea of
|> >>running TCP/IP over radio. I'm pretty familiar with TCP/IP administration,
|> >
|> >>- Eliot
|> >
|> >The first thing you'll need is to get a ham-radio license if you haven't
|> >already. Contacting a local ham club should point you in the right
|> >direction.
|> >
|> >
|> Why would a ham-radio licence be the first thing he will need?
|>
|> Here in Canada, the Dept of Industry and Science (ex-DOC) has given my
|> agency permission to use data communications on our assigned frequencies
|> as long as we do not exceed the authorized bandwidth. Perhaps the FCC
```

|> would give Eliot permission to use ax.25 on commercial frequencies, as well.
|>
|> Perhaps a more pertinent question would be if the various authors of
|> Amateur TCP/IP NOS have any objection to educational institutes or
|> government agencies using this software outside of amateur radio
|> applications. Could commercial interests "hack" the source code, which I
|> understand is readily available, repackage it and sell it?
|>
|> Just a passing thought.
|>
|> 73 de ve3uav/aa8lu
|>
|>
|> --

I guess you didn't see the original post.

In his original post, he mentioned "ham radio" twice. A prudent individual would assume that when he left the word ham off of the later references to radio he was still talking about ham radio, but then that is open for interpretation.

AX.25 protocol is being used on commercial frequencies in the States and has been for many years. In fact commercial users were using amateur TNCs at one time, but I haven't been involved for quite a while so I don't know if they still do or not.

Cheers, Jim.

--

Jim Lynch, Sales Analyst, Cray Research, Inc. / ARS: K4GV0
Southeast District, Phone: (404) 631-2254, Email: jwl@sedist.cray.com
Suite 270, 200 Westpark Drive, Peachtree City, GA 30269

End of Ham-Digital Digest V93 #91

